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| 10/092,859 | 03/06/2002 | W. James Scheuermann | 2397P | 9967 |

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Joseph A. Sawyer, Jr.
SAWYER LAW GROUP LLP
P.O. Box 51418
Palo Alto, CA 94303

EXAMINER

VO, LILIAN

ART UNIT PAPER NUMBER

2195

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,859

Applicant(s)

SCHEUERMANN, W. JAMES

Examiner

Lilian Vo

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 1 – 23 are pending.

Claim Objections

2. **Claim 1** is objected to because the examiner believes the limitation “pacing allocation of the plurality of tasks to the execution node based on the readiness the plurality of task resources” has typographical error. Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1 – 10 are rejected under 35 U.S.C. 101 because they are directed to non-statutory subject matter.

5. **Claims 1 – 10** are directed to method steps, which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter. Specifically, as claimed, it is uncertain what performs each of the claimed method steps. Moreover, each of the claimed steps, inter alias, associating, identifying, pacing, aggregating, reading, generating, reconfiguring, processing, can be practiced mentally in conjunctions with pen and paper. The claimed steps do not define a machine or computer implemented process [see MPEP 2106]. Therefore, the claimed invention is directed to non-statutory subject matter.

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(The examiner suggests applicant to change “method” to “computer implemented method” in the preamble to overcome the outstanding 35 U.S.C. 101 rejection).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 6 – 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) The following terms lack of antecedent basis:

- i) “the step”, in **claim 6**.
- ii) “the steps”, in **claims 7, 8 and 9**.
- iii) “the finite state machine”, in **claims 7, 8 and 9**.
- iv) “the input port”, in **claim 8**.
- v) “the output port”, in **claim 9**.
- vi) “the execution”, in **claim 9**.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

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patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1 – 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hogenauer (US Pat. Application Publication 2002/0184291).

10. Regarding **claim 1**, Hogenauer discloses a method for data flow control of a plurality of execution nodes of an adaptive computing engine (ACE), the method comprising:

- a) associating a plurality of task parameters with a plurality of tasks within an execution mode (page 2, paragraph 17, page 3 paragraphs 27 – 28, fig. 3: 300 – 315);
- b) identifying readiness of a plurality of task resources based on a status of the task parameters (page 3, paragraphs 24, 27, 28, fig. 3: 310); and
- c) pacing allocation of the plurality of tasks to the execution node based on the readiness the plurality of task resources (page 3, paragraph 25, and fig. 3).

11. Regarding **claim 2**, Hogenauer discloses the execution node includes a reconfigurable execution unit (page 2, paragraph 17).

12. Regarding **claim 3**, Hogenauer discloses the reconfigurable execution unit further comprises one or more finite state machines (page 3, paragraph 18).

13. Regarding **claim 4**, Hogenauer discloses the task parameters identify, by designation, an input port, an output port, a finite state machine, and a finite state machine instance (page 3, paragraphs 18, 20, page 4, paragraphs 22, 23).

14. Regarding **claim 5**, Hogenauer discloses the identifying a readiness step further comprises the step of identifying a task as an executable task when the input port is available, the output port is available , and the finite state machine is idle (page 3, paragraph 23).

15. Regarding **claim 6**, Hogenauer discloses the step of aggregating executable tasks in a queue (page 3, paragraph 25).

16. Regarding **claim 7**, Hogenauer discloses the allocation pacing step further comprises the steps of reading the next executable task from the queue and generating a signal to start execution in the finite state machine associated with the next executable task (page 3, paragraph 22).

17. Regarding **claim 8**, Hogenauer discloses the steps of reconfiguring the finite state machine from one instance to another as necessary, reading data from the input port, processing the data in the finite state machine, and writing the data to the output port (page 1, paragraph 12, page 2, paragraphs 17, 18 and 20).

18. Regarding **claim 9**, Hogenauer discloses the step of generating a signal indicating completion of the execution in the finite state machine and re-entering an idle state in the finite state machine (page 3, paragraphs 25, 26).

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19. Regarding **claim 10**, Hogenauer discloses the designation comprises a number (page 2, paragraph 20).

20. Regarding **claim 11**, Hogenauer discloses a system for flow control in processing nodes of an adaptive computing engine (ACE), the system comprising:

a reconfigurable execution unit (page 2, paragraph 17); and

flow control logic coupled to the reconfigurable execution unit for associating tasks and tasks parameters, identifying readiness of task resources based on a status of the task parameters, and pacing allocation of the tasks to the reconfigurable execution unit based on the readiness of the task resources (page 2, paragraph 17, page 3, paragraphs 24, 25, 27, 28).

21. **Claims 12 – 19** are rejected on the same ground as stated in claims 3 – 10 above.

22. Regarding **claim 20**, Hogenauer discloses a system for flow control in processing nodes of an adaptive computing engine (ACE), the system comprising:

a plurality of finite state machines, each finite state machine for performing a task (page 2, paragraph 18);

control logic for determining task parameter status for the task and identifying the task as executable (page 2, paragraph 17, page 3, paragraphs 24, 25, 27, 28);

a task queue for storing executable tasks transfer by the control logic and issuing the executable tasks to the plurality of finite state machines (page 3, paragraph 25).

23. **Claims 21 – 23** are rejected on the same ground as stated in claims 3 – 5 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 571-272-3774. The examiner can normally be reached on Monday - Friday, 8am - 4:30pm.

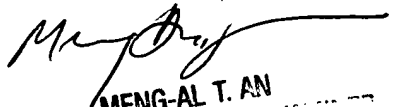
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist at 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2195

lv
August 17, 2005


MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER